

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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KATHRYN TOWNSEND GRIFFIN, HELEN	:	
MCDONALD, and THE ESTATE CHERRIGALE	:	
TOWNSEND,	:	
	:	
Plaintiffs,	:	Docket No. 17-cv-5221 (RJS)
	:	
-against-	:	DECLARATION OF
	:	<u>DR. ALEXANDER STEWART</u>
EDWARD CHRISTOPER SHEERAN, p/k/a ED	:	
SHEERAN, ATLANTIC RECORDING	:	
CORPORATION d/b/a ATLANTIC RECORDS,	:	
SONY/ATV MUSIC PUBLISHING, LLC and	:	
WARNER MUSIC GROUP CORPORATION	:	
d/b/a ASYLUM RECORDS,	:	
	:	
Defendants.	:	
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Dr. Alexander Stewart declares that the following statements are true:

1. I am over 18 years of age and I am otherwise competent to testify, and I have personal knowledge of the information contained in this Declaration. I am Professor of Music, Director of Jazz Studies and former Director of Latin American and Caribbean Studies at the University of Vermont. For a full recitation of my qualifications and background, I respectfully refer the Court to my curriculum vitae. Exh. 1. I analyzed Let’s Get It On (“LGO”) and Thinking Out Loud (“TOL”) by listening to and transcribing the songs, examining sheet music and comparing them.¹

Overall Opinion

2. Let’s Get It On (“LGO”) and Thinking Out Loud (“TOL”) feature the same I-iii-IV-V chord progression with the same harmonic rhythm of anticipated second and fourth chords;

¹ All references herein to LGO are to the single version recording by Marvin Gaye (4:02 in length) and to TOL are to the recording by Ed Sheeran, Farks Dec., Exh. 2 (tracks 1 and 2)(Dkt. No. 067-5), unless otherwise noted. All references to “my report” are to my 12/8/17 report at Farkas Dec. Exh. 6 (Dkt. No. 067-6) unless indicated.

the bass lines are virtually identical throughout most of both songs; the drum parts are virtually identical; the keys and tempos of both songs are as close as possible, and the vocal melodic themes or “hooks” contain many significant similarities.

3. As demonstrated below, even if the analysis is limited to the musical expression contained in the lead sheet deposit copy, the harmony (chord progressions), harmonic rhythm, and melodic hook of LGO is substantially reproduced in TOL. The basic bass line implied by the chords and their metric placement on the LGO deposit copy is also reproduced in TOL.

4. The substantial similarities between the two songs are perhaps best evidenced by Ed Sheeran’s performance of the songs in November, 2014 in Zurich. Video Exh. 1. At the concert, Sheeran starts by playing TOL using only acoustic guitar. At around 4:30, in the middle of the interlude, he interweaves the “hook” from LGO and the audience reacts with enthusiastic recognition. The transition between the two pieces is seamless, precisely because the music – the chord progression, harmonic rhythm, bass line and melody is the same, as discussed below.

A. The Combination of Harmonic and Rhythmic Elements in Let’s Get It On is Creative and Not Found in Prior Works.

5. LGO and the first 24 seconds of TOL feature the same chord progression. The harmony of LGO is notated on the deposit copy. For comparison purposes, and following standard musicological procedure, both songs should be transposed to the same key: D Major. This basic four-chord cycle in LGO and the first 24 seconds of TOL is as follows:

	First Chord	Second Chord	Third Chord	Fourth Chord
Let’s Get It On	D major	F# minor	G major	A major
Thinking Out Loud	D major	F# minor	G major	A major

6. For comparison analytical purposes, musicologists convert these harmonies to Roman numerals in which the number denotes the scale degree of the root and upper-case letters indicate major while lower-case letters denote minor.

	First Chord	Second Chord	Third Chord	Fourth Chord
Let's Get It On	I	iii	IV	V
Thinking Out Loud	I	iii	IV	V

7. As shown above, the chord progression for the first 24 seconds of TOL is identical to LGO. This chord progression was not commonplace prior to LGO, though it is present in some songs identified by Dr. Ferrara.²

8. After the first 24 seconds of TOL, the second chord in TOL is analyzed slightly differently, however the chord progressions in LGO and TOL remain extremely similar because the difference in the second chord in TOL hinges on the presence of an additional single pitch ("D"). However, both experts' transcriptions agree that there is no D note in the second chord prior to the 24-second mark in TOL, only F# and A. See Ferrara, 10/6/2015 Response Music Example 1 on p.7; Report 1-12-18 para 51, p. 17.— opening 16 measures.) The combination of notes F# and A and absence of D (the root) strongly indicate that this chord should be analyzed as F# minor (as in LGO). When the pitch D is added to TOL at 24 seconds it is analyzed as D/F# (below) rather than the F# minor as heard in the first 24 seconds.

9. Both Dr. Ferrara's and my transcriptions correctly indicate the absence of this pitch in the opening guitar part of TOL. Ferrara Report, p. 17 (Musical Example 1).

10. The pitch "D" is added to the second chord in TOL at 24 seconds making it D/F#, and the D/F# chord is used throughout the rest of the verses and choruses of TOL.

² I am aware that defendants have misinterpreted my comment "no problem" at my deposition as referring a third party's opinion that this chord progression was common. My comment "no problem" referred to that third party's opinion that the use of the chord progression in LGO was not plagiarism.

	First Chord	Second Chord	Third Chord	Fourth Chord
Let's Get It On	D major / I	F# minor / iii	G major / IV	A major / V
Thinking Out Loud	D major / I	D major/F# / I/3	G major / IV	A major / V

11. The chart above makes clear that the chord progressions are extremely similar.

12. Regardless of whether the “D” is present in the second chord in TOL (before and after the 24-second mark) since F# minor and D/F# are closely related³ the difference of this single pitch in a single chord is insignificant in the four-chord progression.

13. The chord progression in TOL noted above, or a slight variant of it, is extremely similar to LGO and is used throughout approximately 70% of TOL and 86.7% of LGO.

B. The Harmonic Rhythm of Let's Get It On is Distinctive

14. The harmonic rhythm, “the rhythm articulated by changes of harmony,”⁴ in LGO and TOL is anticipated second and fourth chords.⁵ The harmonic rhythm in LGO is notated on the sheet music deposit copy by the careful placement of chord changes above specific lyrics.

15. Anticipated second and fourth chords means that instead of placing each chord of the four-chord progression equally apart from each other, the second chord and fourth chord are “anticipated,” meaning they are placed before the beat, or earlier than expected.

16. The composer's creative decision to use anticipated metric placement of the second and fourth chords is what gives Let's Get It On its relaxed, loose, confident, “swing.” This creative choice contrasts with the more four-square “on-the-beat” placement of the chords found in almost all of the prior works cited by defendants.

³ Chords are said to be closely related when they share many of the same pitches. In diatonic harmony, the roots of such chords are usually a third apart, as they are here, F# minor and D. These chords also share the same tonic function. Indeed, the iii and I chords are frequently considered interchangeable.

⁴ “Harmonic Rhythm,” The Oxford Companion to Music (2011).

⁵ Rhythmic expression refers to the number of times that a chord is sounded or “attacked.” This is a different musicological concept than harmonic rhythm.

17. The identical combination of the chord progression and distinctive harmonic rhythm of the chord progression in LGO and TOL, is indicative of copying.

18. Dr. Ferrara's statement that harmonic rhythm is the pace at which chords are played is false. Harmonic rhythm is the rate at which the chords *change*. Harmonic rhythm does not "derive" from a chord progression. It is independent of the chord progression. The same chord progression can have any number of different harmonic rhythms.

19. Dr. Ferrara's statement at paragraph 8 of his declaration that LGO and TOL have different harmonic rhythms because TOL "features a two-bar chord progression generally with two chords per bar" while "LGO features a four-bar chord progression with two chord in bar 1, one chord in bar 2, two chords in bar 3 and one chord in bar 4" is baseless.

20. There are only four chords in the progression in TOL and LGIO. Each chord is indicated once. Since harmonic rhythm is the rate of change in the chords, there can be, by definition, only four chord changes. Yet, Dr. Ferrara describes *six* chords in the LGIO deposit copy. In the LGO deposit copy the progression is notated as four bars.

21. No chords are indicated in measures 2 and 4 of the deposit copy because the second and fourth chords are anticipated, i.e., placed at the end of the measure before. The second and fourth measures therefore give no chord because there is no chord change.

22. When the four chords in LGO are notated as a two-measure progression (as they are in Dr. Ferrara and my transcriptions), the chords fall in between the second and third beats exactly the same as in TOL. The harmonic rhythm in LGO could be notated as a four-bar progression or two-bar progression and the internal relationship of the rhythms remain the same.

23. The harmonic rhythm of LGO, and duplicated in TOL, is found in only one work, "Georgy Girl," and none of the instructional books cited by Dr. Ferrara.

C. The Bass Line Melody in LGO Is Duplicated in TOL

24. The bass line of a musical work is set in a lower register and is typically the lowest melodic part. A bass line can be played on any instrument, including the low strings of a guitar. The bass lines LGO and TOL are virtually identical in the guitar part during the first 24 seconds and second verse of TOL and in the bass during the last chorus of TOL.

25. The basic bass line in both songs is 1-3-4-5. The basic bass line is implied by the chords and their metric placement on the deposit copy of LGO. In the first 24 seconds of TOL, the bass line is performed on the low strings of the guitar (which are tuned the same as the bass guitar except an octave higher). This is the only bass part heard for the first 24 seconds and because it is the beginning of the song, it makes a lasting impression of the work.

26. In his 2015 report, page 6 (Exh. 3), Dr. Ferrara offered this transcription of the bass line played on the guitar in TOL as follows:

The image displays two musical staves in bass clef, 4/4 time. The top staff is for "Let's Get It On" starting at 0:02. It shows a sequence of notes: a half note C (chord C), a quarter note G (chord Em7), a quarter note F (chord F), and a half note G (chord G(sus4)). The bottom staff is for "Thinking Out Loud" starting at 0:00. It shows a similar sequence: a half note C5 (chord C5), a quarter note G (chord C/E), a quarter note F (chord F5), and a half note G (chord G5). The notes are transposed to different octaves to represent the same pitch sequence in different keys.

27. Dr. Ferrara transcribed (above) the pitch sequence in the basic bass line (1-3-4-5-5) in the first 24 seconds of TOL and LGO almost identically in his report (when transposed to the same key). I agree with these transcriptions except for the durations.

28. Both Dr. Ferrara and I when depicting the “basic” bass lines used simplified transcriptions that left out rests or moments of silence in the bass parts that occur between many bass notes. This is a typical musicological procedure when the focus is on the pitches and rhythmic placement of the notes. Indeed, Dr. Ferrara’s music example cited above is contradicted

by his fuller transcription on page 17 of his 1/12/18 Report of the guitar part in TOL in which the durations are indicated and many bass notes are sustained for shorter time as follows:

MUSICAL EXAMPLE 1











"Thinking Out Loud"

Guitar part at the opening

At 0:00



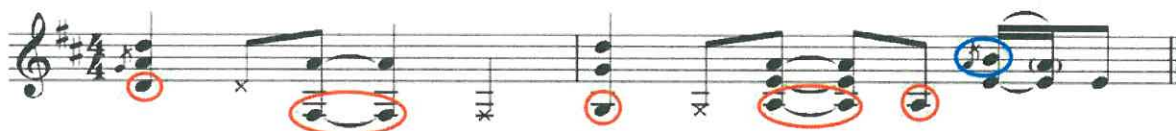
Durations in the opening guitar/bass line of TOL in 2015 report

	Note Duration in Dr. Ferrara 2015 Report	Note Duration in Dr. Ferrara 2018 Report (circled in red above)
Measure #1 (2 notes)	<p>(1) Dotted quarter equal to 1 ½ beats</p>  <p>(2) Eighth note tied to a half note equal to 2 ½ beats</p> 	<p>(1) Quarter note equal to 1 beat</p>  <p>(2) Eighth note tied to a quarter note equal to 1 ½ beats</p> 
Measure #2 (3 notes)	<p>(1) Dotted quarter equal to 1 ½ beats</p>  <p>(2) Eighth note tied to an eighth note equal to 1 beat</p>  <p>(3) Quarter note equal to 1 beat</p> 	<p>(1) Quarter note equal to 1 beat</p>  <p>(2) Eighth note tied to an eighth note equal to 1 beat</p>  <p>(3) Eighth note equal to ½ beat</p> 

As can easily be seen, four out of five of the durations of the bass notes in Dr. Ferrara's transcription of the full guitar part are different from his depiction of the durations of the "basic" bass line in the guitar from his 2015 report. Dr. Ferrara never provided a transcription of the bass line in LGO with the more accurate durations, which I have done below and in my full transcription (Exh. 4).

29. Dr. Ferrara's transcription of the entire guitar part more accurately depicts the durations of the bass notes (circled in red) and also confirms an important decorative figure at the end of the two-measure passage – the melodic movement 5-6 (circled in blue).⁶

At 0:00



30. The two-measure passage from the first 24 seconds of TOL transcribed by Dr. Ferrara (above) is almost exactly the same as the bass line throughout LGO as shown below.

There is only one note in LGO, an additional "3" (in black), that is not copied in TOL:

LGIO	↓	↓	↓	↓			
	1	3	3	4	5	5	5 6

TOL	1	3	4	5	5	5	6
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⁶ In my full transcription of TOL the 5 in the 5-6 figure is notated as a sixteenth note. I disagree with his notation of this short note as a grace note ("a note printed in small type" Harvard Dictionary of Music, 356). In any event, the duration of a grace note is variable and subject to differing interpretations.

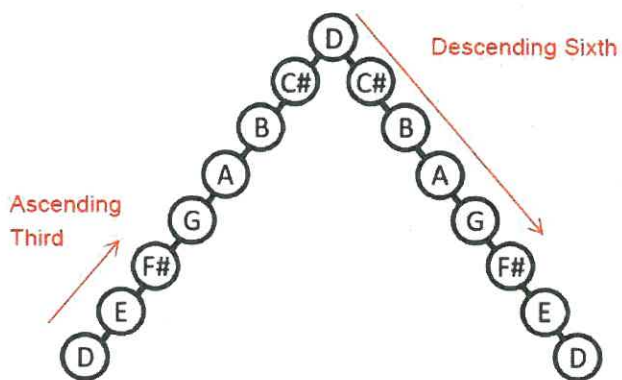
31. The arrows indicate the bass notes in Let's Get It On dictated by the chord names and placement of the chords on the deposit copy of Let's Get It On. The bass notes without arrows (and those with arrows) are transcribed from the single version of LGO.

32. In addition to the pitches (represented by integers 1-7 where do=1, re=2, mi=3, etc.), the metric placement and the durations (how long the notes are sustained) are identical. Even the decorative "turn around" pair of notes (5-6) are heard at the end of the cycle, although in TOL they are placed an octave higher and sounded slightly earlier.

33. An important feature of the bass line in Let's Get It On is the downward leap by a sixth interval (represented by the first "3" in the bass melody transcription). When discussing pitches or intervals as being either ascending or descending we are focusing on the melodic contour or direction of the pitches/intervals within a melody.

34. The second note in the bass line above is approached by a descending sixth, meaning that in the key, the first note is a "1" (D), and the second note descends six diatonic pitches to "F#", which usually would be played by ascending three pitches from D. The use of this unusual choice in the opening bass melody of TOL is evidence of copying.

35. The concept of "ascending" and "descending" D to F# is visualized in this image:



36. The descending sixth gives the bass melody a different contour than if the melody ascended to F# from D, adding an element of contrary motion to the harmony. The ascending

“F#” is more conventional as it tracks the ascent of the chord progression from D to F#. This downward leap by six pitches is especially prominent and important element of the melodic contour of Let’s Get It On and contributes significantly to the melodic flow of the bass line and the underlying cyclical groove (a large fall followed by a steady upward rise back to the first beat of the two-measure pattern).

37. The descending sixth interval is also featured in the bass line of the first 24 seconds of TOL (as shown in paragraph 26, 29 and 30 above) as well as a total of 31 times in the TOL sheet music. Stewart Exh. 5. Although Dr. Ferrara did not offer any full transcriptions of the bass lines from LGO, Dr. Ferrara’s statement on page 4 in his 2015 report (Exh. 3) that “the first iteration of the bass line in “Thinking” has a leap down from 1 to 3 that is similar to ‘Let’s’” acknowledges this similarity. His reference of “leap down from 1 to 3” is another way of describing the “descending sixth.” The presence of the descending sixth in TOL is probative of copying.

38. In the “kitchen demo” of TOL, which Ed Sheeran states is the first recording of TOL and constitutes the composition of TOL, Exh. 12 (Sheeran Tr. at 129:11-12) the descending sixth is heard throughout, or 34 times. The ascending third is not heard a single time.⁷

39. At approximately 25 seconds into Thinking Out Loud, an additional bass line appears (“Bass Line B”) which plays the more conventional ascending third, rather than the descending sixth. However, even following the appearance of Bass Line B, the original bass line with the descending sixth can be found often in Thinking Out Loud (Exh. 5 TOL sheet music with descending bass marked). In LGO, both the descending *and* the ascending bass line are

⁷ As fully explained in my previous report, if Sheeran had wanted an ascending third he could have easily used “drop D” tuning, a form of scordatura (alternate tunings) that has a long history in classical and popular music. Sheeran uses a drop D tuning in “Photograph” see <https://www.youtube.com/watch?v=53uEE1-2CD8>.

heard simultaneously when an additional bass line enters at 1:40 played by the baritone saxophone.

40. The prominence of the baritone saxophone, heard three times during the bridge in the single version 1:40, 1:51, 2:02, and six times in the album version confirms the importance of this line in LGO. None of the prior art cited by Dr. Ferrara contains a simultaneous descending sixth and ascending third.

41. In measures 9 and 10 of the recording (and elsewhere) of Let's Get It On an additional note is introduced into the bass line (circled in blue).⁸ The same added note also appears in the bass line in the final climactic chorus of Thinking Out Loud (circled in blue) *and* the prior "black note" is has also been copied (circled in green).

The image displays three staves of musical notation. The top staff is labeled 'LGO' and shows a bass line with notes marked by red numbers 1, 3, 3, 3, 4, 5, 5, 5, 6. The bottom two staves are labeled 'TOL guitar' and 'TOL bass'. The guitar line also has notes marked by red numbers 1, 3, 3, 3, 4, 5, 5, 5, 6. The bass line has notes marked by red numbers 1, 3, 3, 3, 4, 5, 5, 5, 6. A blue oval highlights a note in the LGO bass line and a corresponding note in the TOL guitar line. A green oval highlights a note in the TOL bass line.

42. As can be seen, 100% of these bass line notes in Let's Get It On recording have been replicated in the last chorus of Thinking Out Loud. These nine notes (1-3-3-3-4-5-5-5-6) are heard throughout the final chorus of Thinking Out Loud except for the final iteration in which the last two notes are left out as the piece goes into its short ending section. The

⁸ More detailed transcriptions of portions of Thinking Out Loud have been facilitated by defendants' production of the instrumental multi-tracks of Thinking Out Loud after my last report.

development of the bass lines in the kitchen demo of TOL follow a similar trajectory of increasing density.

43. The addition of the “blue circle” notes and the presence of the decorative 5-6 notes in both works and other details rule out the possibility that this is coincidental. It is extremely unlikely, if not impossible, that two different songwriters could develop this original creative material with this degree of similarity. As demonstrated above, the bass lines in LGO and TOL are virtually identical at the beginning of the song.

44. Another distinctive similarity in LGO and TOL is the presence of syncopated notes in the bass melodies in addition to the “3” and “5” which are anticipated with the second and fourth chords. In my report at p. 13, the reference to distinctive qualities in LGO and TOL included “anticipation of 3 and 5” as well “syncopation” because these are separate creative qualities of the works. In LGO and TOL, the notes circled below are syncopated (off the beat) in addition the anticipated “3” and “5.” Once again the arrows indicate the harmonic rhythm and implied bass line in the deposit copy.

Additional syncopated notes in Bass/Guitar Lines (LGIO mm 9-10 & TOL mm 3-4, 5-6, also “kitchen” demo

C. The Drum Part in LGO is Creative and Not Found in Prior Works and Is Virtually Duplicated in TOL

45. The drum set rhythm⁹ in LGO is a creative combination of eighth-note closed hi-hats¹⁰, accented snare drums on beats 2 and 4, and syncopated notes on the bass, or “kick” drum. The drum part in TOL is virtually identical.

46. In both works the first appearance of the drum set rhythm begins with a crash symbol (circled in blue).

47. Following the opening measure of each song, the drum set rhythms are virtually identical. The drum parts in LGO and TOL both include eighth-note closed hi-hats, accented snare drums on 2 and 4 beats, and bass drum on the 1 and syncopated on the “and” of two and the “and” of three.

⁹ When discussing the drum set, it is important to keep in mind that the drummer is really a multi-instrumentalist playing multiple instruments at once. Each of the different instruments has a distinct timbre (tone color) and relative pitch level. The bass drum or “kick” is set to the lowest pitch; the snare, a higher raspy, piercing sound.

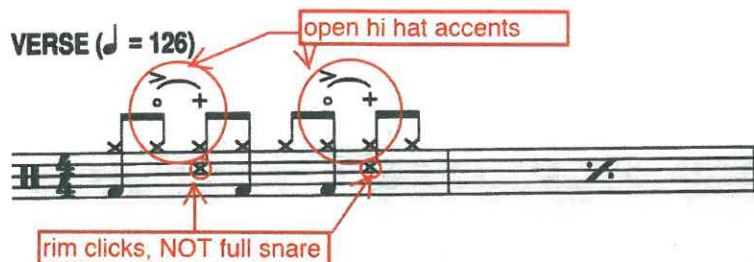
¹⁰ The hi-hat, a high pitched foot-operated pair of cymbals that can also be struck with drum sticks, is compositionally one of the most expressive instruments in this percussive arsenal – capable of short crisp notes when the cymbal pair is closed, longer woosh sounds when the pair is left open, and everything in between.

48. One small difference is that there is an additional bass drum on the “4” beats of LGO that doubles the accented snare that is not present in TOL. This difference is insignificant because the snare drum in TOL (and LGO) also “attacks” on the “4” so that the bass drum is “doubling” its effect. The syncopated bass drum attacks on the “and” of 2 and 3 are the material element of the drum part in both works because they give Let’s Get It On and Thinking Out Loud their off-beat swing and accent or reinforce the syncopated “3” and “5” bass notes in the bass line melody that simultaneously occur.

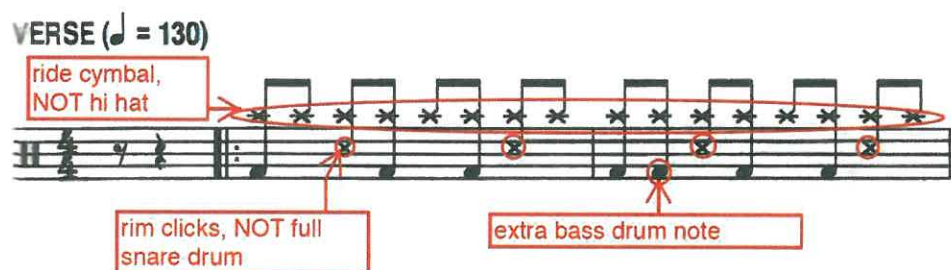
49. The particular combination of these elements in LGO’s drum part is also in TOL, but is not found in any work pre-dating LGO by Dr. Ferrara. This is probative of copying. Dr. Ferrara’s prior art examples, “Papa’s Got A Brand New Bag” and “Out Of Sight” are off the mark.

50. First, “Papa’s Got A Brand New Bag” uses open hi-hats which are compositionally different, and notated differently (with an “o” above hi-hat) than closed hi-hats (no “o” above the hi-hat) used in Let’s Get It On and Thinking Out Loud. Exh. 9, p. 29; Farkas Dec., Exh. 4 (Ferrara Report) at Exh. I. Open hi-hats sound dramatically different than closed hi-hats because they have a much longer duration (legato) “woosh” sounds than the crisp “chick” sound produced when the hi-hat is closed. In addition, “Papa’s” features rim clicks which are compositionally different and notated differently than snare drums attacks (with an “x” instead of a note head). Rim clicks (crisp clicks of drumstick on the rim of a drum) are of much shorter duration than the longer resonating note on the full snare drum head. In addition, the tempo of “Papa’s” is 130 beats per minute is extremely different than Let’s Get It On. Farkas Dec., Exh. 4 (Ferrara Report) at Exh. I. Accordingly, the drum part in Papa’s is very different than Let’s Get It On, nor does it sound the same.

51. The transcription of “Papa’s Got A Brand New Bag” below is cut and pasted from “The Funkmasters.” Exh. 9, p. 29.



52. Similarly, the drum part in “Out of Sight” cited by Dr. Ferrara does not have closed hi-hats, or any hi-hats at all, and instead uses a ride cymbal. Ride cymbals have an even more legato feel (longer duration) than open hi-hats and are also compositionally different than any hi-hats (open or closed) as reflected in their notation on ledger lines above the staff as can be seen below. In addition, “Out Of Sight” also features rim clicks which are compositionally different and a very different tempo. Ferrara Report, ¶ 74 (stating it is a “ride cymbal pattern”). The transcription of “Out Of Sight” below is cut and pasted from The Funkmasters, Exh. 9 p. 23.



53. These drum parts in “Papa’s” and “Out Of Sight” sound very different than the drum parts in LGO and TOL.

54. Finally, all of the instruction books cited by Dr. Ferrara purporting to contain similar drum parts as Let’s Get It On were published more than 10 or 20 years after LGO was composed. Farkas Dec., Exh. 4 (Ferrara Report) at Exh. I (published in 1996); Exh. J (published in 1997); Exh. K (published in 1982); Exh. L (published in 1997).

55. I disagree with defendants' contention that the bass drum note in the second half of beat 3 of TOL is isolated and disrupts the basic rhythm because this note is immediately "resolved" by a prominent accented note on the snare drum on beat 4.

D. Let's Get It On's Melody is Creative

56. As I noted in my June 9, 2015 report there are vocal melodic similarities in the melodic hook of LGO and the verses in TOL. Exh. 7, p. 7. As explained in my deposition, additional vocal melody similarities exist in the two works. Stewart Tr., p. 277:5-13.

57. The central melodic "hook" of Let's Get It On, contains the pitch sequence 6-5-3-2-6-5-3-5-6-5-3 to which the song's title is set. This melodic hook is the most recognizable and repeatable phrase in the entire song. This melody appears in the deposit copy of Let's Get It On (end of measure 23) and is present with slight embellishments in the single (at 0:36). Other instances of related figures in Let's Get It On are found in measures 62-64, 70-71, 126-128 and 158-159 of the deposit copy and at 1:32, 1:42, 2:17, 3:47 and 4:02 of the single.

58. The melodic hook is substantially copied and used as the verse melody in TOL, including in the opening lines of TOL. The example below is LGO deposit copy measure 32 (0:36 LGO recording) and TOL at 0:00:

The image displays two musical staves in 4/4 time, both in the key of D major (indicated by two sharps). The first staff represents measure 32 of 'Let's Get It On' (LGO). The melody is written on a treble clef staff with a key signature of two sharps. The notes are: D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C#4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter). The lyrics 'Let's get it on' are written below the first five notes, and 'su - gar' is written below the next five notes. The second staff represents the opening verse of 'Thinking Out Loud' (TOL). The melody is written on a treble clef staff with a key signature of two sharps. The notes are: D4 (quarter), E4 (quarter), F#4 (quarter), G4 (quarter), A4 (quarter), G4 (quarter), F#4 (quarter), E4 (quarter), D4 (quarter), C#4 (quarter), B3 (quarter), A3 (quarter), G3 (quarter), F#3 (quarter), E3 (quarter), D3 (quarter). The lyrics 'When your legs don't work like they used to be - fore,' are written below the first five notes, and 'And I can't sweep you off of your feet,' is written below the next five notes. Above the notes, red numbers indicate the pitch sequence: 1 1 1 6 5 3 2 6 5 3 5 6 5 3 for LGO and 3 5 6 5 3 2 1 2 3 6 1 3 5 6 5 3 3 2 1 1 for TOL.

59. The difference between the Let's Get It On melodic hook and the opening verse of Thinking Out Loud is the added 1-2-3-6-1 melody in TOL in the middle of the melodic hook.

From a strict “counting up the notes” perspective the addition of five notes in the middle of the pitch sequence, the melodies are not identical, however, the strength of the impression of the melodic hook in LGO maintains its similarity to TOL, particularly since the melodies are the same for the four notes immediately before and five notes immediately after these added notes, and the underlying harmonies, harmonic rhythm and bass lines are the same.

60. This melody forms the core musical expression of the verses of Thinking Out Loud where similar melodic phrases occur eight times. Significantly, this is the passage from LGO that Sheeran chose to quote in the middle of his medley of TOL and LGO. Vid. Exh. 1.

61. The overall vocal melodies in the Let’s Get It On deposit copy are substantially the same as in the recording, including this melodic hook.

H. Additional Similarities in Melodic Contour and Phrasing

62. In my December 8, 2017 Report, I provided detailed transcriptions and analysis of the similarities in additional melodies in LGO and TOL that have been referred to as Melodies A, B, C at pages 7.

63. Melodies “A,” “B,” and “C” in LGO and TOL contain some pitch sequence differences, however these small differences are diminished given their very similar melodic contours in each example, “A,” “B,” and “C” and because the melodies occur over virtually identical harmonies, harmonic rhythms, bass melodies and drum parts.

Melody “A”

64. As demonstrated on page 7, the first vocal phrases (Melody A) in LGO and TOL

share similar phrasing¹¹, melodic contour¹² and pitch content along with minor differences. The opening melody of LGO is one of its most memorable. In addition, this phrase and a slight variant are heard eight times in TOL making it one of the most frequently heard themes in TOL.

Opening themes of LGIO and TOL compared / “Melody A”

The image shows two musical staves in 4/4 time, G major. The top staff, labeled LGIO with a timestamp of 0:01, has a melody starting on D (quarter), followed by a quarter rest, then F# (quarter), G (quarter), A (quarter), and G (quarter). The bottom staff, labeled TOL with a timestamp of 0:00, has a melody starting on D (quarter), followed by a quarter rest, then D/F# (quarter), G (quarter), A (quarter), and G (quarter). Chord symbols D, F#min, G, and A are written above the LGIO staff, and D, D/F#, G, and A are written above the TOL staff. Lyrics are provided below each staff.

LGIO
0:01 D F#min G A
I've ben real - ly try - in' ba - by

TOL
0:00 D D/F# G A
When your legs don't work like they used to be - fore,

65. Both phrases unfold mostly stepwise, are set to an arch-like contour beginning on the 3rd note of the scale (F#) and proceed up to the third note in the phrase before descending to and decorating the tonic (D or 1). Both phrases also linger on pitches 3 and 2 over the bar line as a way of creating tension as the tonic or 1 is approached.

66. The pitch 3 is blues-inflected, meaning the intonation is expressed at a variable pitch level. Contemporary musicological research regards that the major third, minor third, and “all possible intonations constitute the same toneme” or the same scale degree, in this case 3.¹³ Dr. Ferrara’s explanation of the “blue note” is outdated and an attempt to differentiate between the third degree of the scale in each song and subtract one note from the similar pitch sequences. TOL’s thirds begin on or pass through a fully-flatted third before coming to a rest on a major or non-flattened third.

¹¹ Phrasing is the placement of a discrete sequence of notes.

¹² Melodic contour is the shape of a melodic phrase as the pitches rise, fall or remain level.

¹³ See, for example, Evans, David (1982). *Big Road Blues*, p. 24; Kubik, Gerhard. *Africa and the Blues* (1999), p. 87, pp. 118-51 and Kubik, Gerhard. “Blue note,” *Grove Music Online. Oxford Music Online*. Oxford University Press, accessed December 7, 2017.

67. The first phrase from LGO contains eight syllables. A comparison of the first 8 pitches of these syllables in LGO with the first 8 pitches in TOL by converting them to the same key yields a very similar sequence:

Let's Get It On	3-4-5-4-3-2-1-2
Thinking Out Loud	3-5-6-5-3-2-1-2

68. The only difference is that the three notes following the first pitch are raised by one scale degree – 4-5-4 becomes 5-6-5. As shown above in paragraph 58, 3-5-6-5-3 is central to the melodic hook of LGO. These phrases also share strong similarities in rhythm, phrasing and metric placement. Both begin on the same beat (the “and” of two), straddle the bar line of the two-measure pattern repeated in the bass line, harmony, and drums, and end in the middle of the second measure.¹⁴

Melody B

69. Melody “B” is analyzed on page 9 of my December 9, 2015 Report. Melody B occurs in LGO at the end of verse 4 (deposit copy m. 110; single 2:38) and in TOL at the beginning of the chorus. Although the melodies come from different parts of each song, this is immaterial to their similarity because they are underpinned by the same harmony and rhythm.

The image displays two musical staves comparing Melody B from two songs. The top staff, labeled 'LGO', is in D major (one sharp) and 4/4 time, with a time signature of 2:38. It shows the melody for the phrase 'If you believe in love, let's get it on.' with chords D, F#min, G, and A. The bottom staff, labeled 'TOL', is also in D major and 4/4 time, with a time signature of 1:16. It shows the melody for the phrase 'Take me in-to your lov-in' arms' with chords D, D/F#, G, and A. Both melodies are very similar, starting on the same note and following a similar contour.

¹⁴ Melody A in TOL represents a borrowing from the two most important signature melodic elements of LGO: an amalgamation of the phrasing, melodic contour, and pitch content of the opening phrase of LGO and the pitch sequence of the signature chorus theme or hook of LGO. Exh. 7, p. 7.

70. The pitches of the melodies in the chorus/hook are compared as follows:

Let's Get It On	3-5-4-4-3-3-3-1-2-3
Thinking Out Loud	3-5-5-5-4-4-4-3-3-2-3

71. These melodies are placed over virtually identical harmonies, harmonic rhythms, bass melodies and drum parts in LGO and TOL. The overall identity of this melodic expression and the harmonic/melodic/rhythmic matrix over which it is placed in LGO and TOL minimizes the slight pitch differences in the repeated pattern of notes. While the pitches may not line up exactly the overall melodic gestures are very similar: a skip up from 3 to 5 and gradual mostly stepwise descent to 2 and then upward movement to 3.

72. The first note of Melody B in TLO is notated as a grace note, however this does not negate similarity with LGO because in TOL the grace note is a pick-up to the phrase. I transcribed this grace note in my preliminary report dated 6/9/2015 that was produced to defendants. Exh. 7, p. 8.

Melody "C"

73. Melody "C" is analyzed on pages 10-11 of my December 9, 2015 Report. This melody appears in the interlude section of TOL and shares significant similarities with one of the most memorable phrases in LGO at the beginning of deposit copy Verse 2 ("we're all sensitive people"). Melody "C" consists of repeated notes on a descending scale:

Let's Get It On	8-8-7-7-8-7-7-6-5-3-5-1-6-5
Thinking Out Loud	8-8-8-7-7-7-6-6-6-5-5-3-2-1
Let's Get It On (Sheeran live)	8-8-8-7-7-8-7-6-1-3-5-3-7-6

74. Significantly, Ed Sheeran quotes this passage from LGO when he sings "Let's Get It On" during a live performance of "Thinking Out Loud." Vid. Exh. 1.

75. I disagree with defendants' claim that repeating notes on a descending D major scale is a basic musical building block. The repeating descending notes in Melody C are creative and not an inevitable result of descending down a major scale because there are myriad ways in which a melody may descend down a major scale.

E. The Combination of Harmonic, Rhythmic, Bass Line, Hi-Hat, Bass Drum, Snare Drum and Melodic Elements in Let's Get It On is Creative and Original

76. Quantitatively, the harmonic, rhythmic, and melodic matrix (four-chord progression, harmonic rhythm, bass line, and drum part) discussed above is central to both songs. In LGO it is the foundation for virtually the whole song - the verses, choruses and part of the bridge – and gives LGO its defining and distinctive relaxed, confident swing. Qualitatively, it is distinctive and immediately recognizable as LGO. As represented in the deposit copy and in my transcription, this matrix is heard (with minor variations in the bass and occasional drum “fills”) 36 times during the verses, choruses, and bridges, or during 86.7% of the song [deposit copy: 144 measures out of 166; transcription: 72 out of 83 measures]. In TOL it forms the core of the verses, choruses, and interlude where it appears 32 times, or during slightly more than 70% of the song. [64 out of 91 measures].

77. Full score comparisons reveal the extent of the similar identity of the two works. The top two lines or staves of LGO are taken directly from the deposit copy and closely track the recording and are indicative of copying. **Of the 93 notes depicted in the transcription of Thinking Out Loud below, which includes all the significant parts of the first part of the second verse, all but 12 notes, or 87%, are found in the chorus of LGO.**

Full Score Comparison

Let's Get It On, first chorus (m. 23 Deposit Copy; 0:36 single recording)

musical score for the first chorus of "Let's Get It On" (measures 23-26). The score includes vocal, chord changes, bass, and drums. The key signature is D major (two sharps). The vocal line features the lyrics "Let's get it on su - gar Let's get it on Ooh". The chord progression is D, F#m, G, A, D, F#m, G, A. The bass line and drums provide a rhythmic foundation.

Thinking Out Loud, beginning second verse (1:43 recording; sheet music m. 1 repeat)

musical score for the beginning of the second verse of "Thinking Out Loud" (measures 1-4). The score includes vocal, guitar, bass/keys, and drums. The key signature is D major (two sharps). The vocal line features the lyrics "When my hair's all gone and my mem-o-ry fades, and the crowds don't re-mem-ber my name,". The guitar and bass/keys parts include chord changes and fingerings. The drums provide a rhythmic pattern.

78. The similarities identified above in the second verse of TOL, are also present in the first verse (without drums and with the basic bass line melody, see paragraph 26, 30 supra). The chorus sections of TOL also contain the chord progression, harmonic rhythm, drum parts and bass lines. These verses and choruses constitute 70% of TOL.

F. Key, Tempo & Genre

79. LGO is in the key of E flat major and TOL is in the key of D major. These are as close as possible; D major is a semitone or half step below E flat. Both works are rock/soul ballads with a gospel flavor (as evidenced in the gospel-style choir heard in LGO and TOL at 2:56). Tempo is a compositional element and an important consideration for most composers. It sets mood of the composition and it is often indicated on scores. The tempos of TOL (82 beats per minute (“bpm”) and LGO (79 bpm) add to their similarity.

G. Lead Sheets

80. The deposit copy of LGO is a “lead sheet.” Lead sheets typically convey the song’s lyrics, melody, and harmony, as a kind of shorthand of the song.¹⁵

81. I am certain that the lead sheet deposit copy of Let’s Get It On is not only based on, but is a direct transcription of the “single” version of the Marvin Gaye recording because the vocal melody in the lead sheet matches Marvin Gaye’s recording to such a precise degree. It is implausible, if not impossible, that Marvin Gaye took the notated score on the lead sheet as a set of “instructions” for how to sing Let’s Get It On, including melismas, and delivered such an exacting performance, conforming to the sheet music with such precision.

82. This is even more implausible given the information in the liner notes of the Deluxe Edition that Gaye’s vocal performance on LGO is a “live” take that consisted of ten straight minutes of singing, so long in fact, that an additional recording titled “Keep Getting It On” was created from the over four minutes of additional live singing. Exh. 9. That the lead sheet was transcribed from the Marvin Gaye recording, rather than Gaye sang the lead sheet notation, is the only possibility. There are only insignificant variances.

¹⁵ The lead sheets that I have compared with recordings of the composition show varying degrees of accuracy and completeness reflecting widely varying skills of the musicians who were hired to prepare them and the resources available to the songwriters.

83. The liner notes to the album, Let's Get It On (Deluxe Edition) indicate the LGO demo was recorded on March 12, 1973 ("LGO demo") and that Gaye recomposed the lyrics in a recording session on March 22, 1973. Exh. 9. I transcribed the LGO demo lyrics. Exh. 10.

84. It is not possible the sheet music deposit copy was published in February 1973 because it contains the recomposed lyrics from the March 22, 1973 session, word-for-word.

85. The lyrics on the LGO demo contain many lyrics that do not appear in the later recorded single version. In example, "Understanding and brotherhood" and "everybody ought to try and do some good." Based on these lyrical differences it is impossible that the sheet music deposit copy could not only anticipate the changes that would be made to the music at a later date but also capture every vocalization of the melody to such an exacting degree. It is clear that the deposit copy is a transcription of the single version recorded on March 22, 1973.

86. In addition, the placement of each chord on the deposit copy exactly corresponds with the lyric on which the chord changes in the Marvin Gaye recording. Finally, the deposit copy has the same form/structure as the Marvin Gaye single recording, including exactly the same number of measures in cut time. Although cut time is not indicated on the deposit copy, it is plainly an omission based on the Marvin Gaye recording.

H. Purported "Differences"

87. Defendants point to a number of differences in TOL and LGO. These differences are not significant. For example, portions of TOL contain chord sequences that are different from LGO. However, the combination of harmonic and rhythmic elements from LGO comprises the opening segment of TOL, as well as all of the other verses and forms the majority of the chorus in the song. That there may be other chord sequences used in TOL does not minimize the import of this combination of harmonic and rhythmic elements in TOL.

88. Defendants point to different song structures (sequence of verses, choruses and bridge) in TOL and LGO. This is trivial difference does not lessen the effect of use of the same combination of harmonic and rhythmic elements from LGO in the verses and choruses of TOL.

89. Defendants also note that TOL has an additional bass line, “bass line B” played by the bass guitar at 24 seconds. The additional bass line does not lessen the extreme similarity of the bass line in the first 24 seconds of TOL and LGO. As explained in in paragraphs 41-42, the elaborated bass line played by the bass guitar in the last chorus of TOL is nearly identical to LGO. Further, in the kitchen demo of TOL it is the only bass line heard.

“Prior Art”

90. Dr. Ferrara identified 13 songs, (1) True Love Ways; (2) Once Upon A Dream; (3) A Summer Song; (4) Fun, Fun, Fun (5) I Go To Pieces; (6) You Didn’t Have To Be So Nice; (7) Georgy Girl¹⁶; (8) Different Drum; (9) Hurdy Gurdy Man; (10) I Started A Joke; (11) Crocodile Rock; (12) Get Off My Cloud; (13) Last One To Know that pre-date LGO that contain the same I-iii-IV-V chord progression. However, that is where the similarities with LGO end.

91. Of these musical works, only Georgy Girl has the same anticipated rhythm of the second and fourth chords featured in LGO and TOL, however the melodic hook from LGO copied in TOL is not found in Georgy Girl. In addition, Georgy Girl does not feature the distinctive “descending sixth” at the beginning of the bass line or the syncopated notes in the bass melody featured in LGO and TOL. In addition, none of these musical works feature simultaneous bass melodies of an ascending third and descending sixth featured in LGO and TOL. Finally, only Crocodile Rock has syncopated bass notes, other than the anticipated “3” and “5” of the harmony, which are featured in LGO and TOL.

¹⁶ Dr. Ferrara also identified “Downtown.” I have listened to this recording however, the I-iii-IV-V progression only happens a total of twice in the whole song at 2:02 & 2:11. I do not consider this to be a good example.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: September 7, 2018

A handwritten signature in black ink, appearing to read "Alexander Stewart", written over a horizontal line.

Alexander Stewart, Ph.D.